Technical Attachment

Experiences at the NASA Leadership Training Course

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1. Introduction

This year marks the 20th anniversary of the U.S. Space Camp at the U.S. Space and Rocket Center (SRC) in Huntsville, Alabama. Over its twenty years of existence, the Space Camp has graduated over 400,000 trainees ranging from fourth graders to adults. In addition, several other programs have been developed there, including Advanced Space Academy, Aviation Challenge, and a host of corporate training programs.

In May this year I was given the unique privilege of attending the SRC course called Mission to the S.T.A.R.S. - Leadership for Critical Times. The S.T.A.R.S. acronym stands for a "scientific task force of Americans residing in space." Trainers from the Management Development Center, a training branch of the U.S. Office of Personnel Management, conducted the course. The two-day course consisted of a series of physical and mental challenges designed to promote teamwork, while identifying individual leadership strengths and limitations. Participants in the course included thirty-two individuals from a wide array of federal government agencies. The people in attendance were broken into four separate teams titled Alpha, Bravo, Charlie and Delta. I was elected to the Charlie team, which would interact with members of the Delta team in future exercises.

The overall goal of the course was to focus on the seven managerial competencies that are central to providing effective leadership during critical situations. These seven competencies are: (1) Human Resource Management, (2) Problem Solving, (3) Resilience, (4) Accountability, (5) Decisiveness, (6) Interpersonal Skills, and (7) Oral Communication. The term "HP-RADIO" was used to identify the seven competencies throughout the course. In a variety of settings, teams were given a series of problems or obstacles to overcome. To attack these obstacles, teams were forced to "think outside the box" and examine new ways to accomplish the task at hand.

2. Team Training and Development

As part of the Mission to the S.T.A.R.S. program, team members were given several challenges to complete within a pre-determined time period. Each team was tasked with choosing a leader and a recorder for each group challenge. Only the leader was given the specific instructions and goals for the challenge, and he or she was responsible for relaying these in an effective manner to the other team members. In some instances, the team leader was not allowed to verbally communicate with the team and was forced to demonstrate the goals of the challenge through other means. The recorder's role was to assess the team's performance as it relates to HP-RADIO competencies.

These challenges, known at the SRC as Area 51, tested both the physical and mental stamina of the participants while amplifying the need for teamwork and cooperation. After each challenge, the recorder would read through the seven managerial competencies allowing for real-time peer review

of the team's effort. To facilitate the growth of team members, and in turn the team as a whole, it is essential to provide constructive and honest feedback (Carnegie 1936). As the challenges progressed, our growth as a team became evident. In fact, one of the trainers who has been teaching this type of course for fifteen years noted that our team completed one of the obstacle challenges using a method he had never seen employed before.

3. Shuttle Mission

The experiences at Area 51 were used as a building block for the real assignment the teams would soon encounter. All four teams were gathered together and instructed that they were to plan and execute a simulated rescue of a team of American scientists who were trapped in space. Before the filming of *Apollo 13*, several of the cast members including Ron Howard, Tom Hanks, and Bill Paxton participated in a simulation similar to the S.T.A.R.S. mission. Movie director Ron Howard believed it was essential for the cast to "walk in the shoes" of the Apollo 13 astronauts in order to depict the events in a factual manner.

To properly prepare for the simulated rescue, a brief orientation about the Space Shuttle and roles of the crew was given by a shuttle expert. The teams were tasked with assigning roles for two separate portions of the mission. For the first half of the mission, team Charlie was assigned to pilot the *Atlantis* shuttle while team Delta manned mission control. Midway through the mission, the teams would swap roles. This allowed members of both Charlie and Delta teams to experience all aspects of the shuttle mission. In addition, this format forced the Charlie and Delta teams to work together as a cohesive unit to complete the prescribed tasks.

The *Atlantis* shuttle simulator at the SRC contains the same cockpit and controls as the real *Columbia* and *Discovery* spacecraft. Also, the mission control room contains nearly the same communications and computer setup as the real mission control in Houston, Texas. In an attempt to duplicate issues that often develop on the job, the course designers built emergencies into the simulation that had to be resolved in order for the crew to fulfill its mission. For example, mission control had to walk the pilot and commander of the shuttle through certain steps to troubleshoot warning lights as well as solve on-board medical emergencies including broken limbs and other ailments.

4. Conclusions

In the end, the mission was completed successfully with shuttle and astronauts returning safely to earth. Unlike some distance-learning based classes, the participants in the S.T.A.R.S. training program were able to see first-hand the need for effective leadership and teamwork while receiving real-time evaluation and peer review. At the end of program, it was exciting to see how a diverse group of individuals who had never interacted before could work together to achieve a common goal. The open feedback and evaluation process along with the team building exercises at Area 51 allowed us to gain confidence and cohesiveness as a group, two attributes that are vital to successful teams (Maxwell 1995).

Much like the Southern Region Building Leaders for a Solid Tomorrow (BLAST) program, the S.T.A.R.S. program emphasized the need for open communication and effective action (Zeitler *et al.* 2002). These two core areas are the building blocks from which the seven key managerial competencies evolve. Without solid communication skills and follow-up actions, our team would not have succeeded in its tasks. The S.T.A.R.S. course has helped me to identify my leadership strengths and limitations, and gave me a better idea of the leadership aspects that I need to cultivate to grow as an individual. Participation in the S.T.A.R.S. course could be viewed as a further extension of your local office BLAST program, and I would highly recommend this course to any NWS employee desiring to improve their leadership abilities.

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Further information on the Mission to the S.T.A.R.S. program is at http://www.leadership.opm.gov/courselist.cfm. The cost for the two-day course, including lodging and meals is $1,825. For further information on the U.S. Space and Rocket Center, see http://www.spacecamp.com/museum.

References

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